EXCELLENCE—Every project. Every day.

Environmental Qualification

ENERCON is a leader in providing engineering services for environmental qualification (EQ) as required by 10 CFR 50.49. The ENERCON team is familiar with the regulatory guidance within RG 1.89 and IEB 79-01 as well as industry guidance documents such as IEEE-323. ENERCON maintains offices throughout the United States and can provide remote support as well as a long-term site presence to ensure effective project execution. ENERCON has excellent depth of talent and can provide a quality product, quickly and efficiently.

ENERCON has a dedicated team to support EQ projects within the Engineering & Safety Analysis group. This team consists of over 30 talented project staff with varied backgrounds, including engineers with PEs, PhDs, and Master's degrees as well as subject matter experts with 30+ years of experience in all aspects of the EQ program including procurement, program maintenance, and technical evaluations. ENERCON also maintains a group of former licensed SROs that can provide input on plant operations. This expertise is valuable when performing operability evaluations or determining operational requirements of specific equipment. This diversity of expertise allows ENERCON to provide a cost-effective team with a blend of experience levels led by subject matter experts to provide technical direction and ensure quality deliverables.

ENERCON is available to support client needs 24-7 as we understand the significant impact on the plant due to extended outage time, LCOs, operability evaluations, potential NRC violations, etc. ENERCON provides a wide-reaching knowledge base to allow support of any EQ project.

ENERCON has supported EQ projects at more than 20 sites and with engineer-of-choice contracts at most of the utilities in the industry, ENERCON maintains organizations that are knowledgeable in plant processes, procedures, and designs. Due to our wide client base, ENERCON has experience with various documentation packages configuration and EQ databases including EQMS and Genesis/Milieu. ENERCON also has experience using EQDB and SYS1000. In addition, ENERCON actively participates in the EQ Technical Meetings, which allows us to be current on the latest EQ issues and lessons learned in the industry.

ENERCON has recently supported many EQ projects. These projects include:

- plant life extension analysis; backlog reduction
- updates of the accident temperature profiles
- updates of the accident doses due to changes in fuel cycle
- fuel type, or source terms
- performing onsite EQ training
- supporting NRC EQ DBAIs
- correction of non-conforming conditions
- operability support
- general design support.

ENERCON can provide the following key services related to equipment qualification:

- Qualification Package Creation/Revision
- Qualification Analyses
- Correction of Non-Conforming Conditions
- Emergent Issue Support
- Design Basis Assurance Inspection (DBAI) Support
- License Renewal and Subsequent License Renewal Implementation Updates
- Expert Third-Party Reviews
- EQ Training
- EQ Program Updates to Procedures or Program Basis Documents
- Backlog Reduction of CAP Items, Outstanding Design Changes, etc.
- Adverse Localized Environment Identification and Incorporation of Impact into the EQ Program
- Fuel Cycle Change Updates (CAVEX, power uprate, cycle length change, etc.)
- Accident Analysis Updates (MSIV leakage changes, alternate source terms, changes in fuel type, etc.)
- Radiation Shielding and Design Basis Analyses (MicroShield, MCNP, Excel, etc.)
- Thermohydraulic Analyses (GOTHIC, RELAP, PROTOFLOW, etc.)





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